## AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 19, line 5, with the following rewritten paragraph:

--Fig. 2 is a Figs. 2a-2c are waveform diagrams showing respective enlarged voltage and current waveforms for each portion of the switching power supply circuit;--

Please replace the paragraph beginning on page 19, line 11, with the following rewritten paragraph:

--Fig. 5 is a Figs. 5a-5b are circuit diagrams showing a constant current output control device according to another embodiment of the present invention;--

Please replace the paragraph beginning on page 20, line 19, with the following rewritten paragraph:

--A fundamental operation of this switching power supply circuit 50 will be explained briefly with reference to <u>Figs. 2a-c</u> Fig. 2. When the switching device 3 is switched on, an exciting current Ip (hereinafter referred to as "primary winding current") begins to flow in the primary winding 2a that is connected in-series, and an induced electromotive force is generated in each winding of the transformer 2.--

Please replace the paragraph beginning on page 21, line 5, with the following rewritten paragraph:

--When discharge of electric energy stored in the secondary output winding 2b is completed as a result of the induced electromotive force, oscillation begins due to in-series resonance of stray capacity of the primary winding 2a and the switching device 3, and so on, with the primary winding 2a, as shown by a voltage V<sub>2a</sub> waveform of the primary winding 2a in <u>Fig. 2c</u> <del>Fig. 2 (e)</del>. This oscillation gradually reduces in magnitude.--

Please replace the paragraph beginning on page 21, line 15, with the following rewritten paragraph:

--During these oscillations, an output current I<sub>20</sub> output from the rectifying smoothing circuits 4 and 13 can be expressed by an average value of a secondary winding current Is that flows in the secondary output winding 2b during the oscillation period T and expressed as follows:

Equation

$$I_{2o} = I_{Smax} \times T2 \div T \div 2 \cdots (4)$$

where, Is<sub>max</sub> is a peak current generated in the secondary output winding 2b, T2 is an output time during which output is generated in the rectifying smoothing circuits 4 and 13 within oscillation period T, namely, a time for which output current flows in the secondary output winding 2b (refer to Fig. 2b Fig. 2 (b)).--

Please replace the paragraph beginning on page 22, line 7, with the following rewritten paragraph:

--In addition, if the ON time of the oscillating switching device 3 that excites the primary winding 2a is taken as T1; and an OFF adjustment time as T3; the oscillation period T, as shown in Figs. 2a-2c Fig. 2, is expressed by:--

Please replace the paragraph beginning on page 24, line 14, with the following rewritten paragraph:

--As shown in Figs. 2a-2c Fig. 2, the output time T2 during which output is generated in the secondary output winding 2b is the discharge time of the energy stored in the transformer 2. This output time T2 is equal to the time from when the oscillating switching device 3 is switched off, until the time when the polarities of both terminals of the primary winding 2a switch due to the flyback voltage generated in the primary winding 2a reducing and free oscillation beginning--

Please replace the paragraph beginning on page 30, line 15, with the following rewritten paragraph:

--Fig. 5 is a Figs. 5a-5b are circuit diagrams showing a constant current output control device 8 (hereinafter referred to as "switching control circuit 8") of a switching power supply circuit 80 according to a further embodiment of the present invention.--

Please replace the paragraph beginning on page 40, line 17, with the following rewritten paragraph:

--A comparison of Figs. 5a-5b Fig. 5 and Fig. 6 illustrates, the structure of the switching control circuit 7 according to this embodiment is substantially the same as the structure for constant voltage output control of the switching control circuit 8 according to a previous embodiment.

Accordingly, structure of the aforementioned switching power supply circuit 70 that is the same as that of the switching control circuit 8 will be denoted with the same reference numerals, and its explanation omitted. In other words, with the switching power supply circuit 70 according to this

Application No.: 10/748,591 4 Docket No.: 09616/0200490-US0

embodiment, it is possible to realize both the constant voltage control and the constant current output control, through only slight modifications of the structure of the switching control circuit 7.--

Application No.: 10/748,591 5 Docket No.: 09616/0200490-US0

## **AMENDMENTS TO THE DRAWINGS**

Figures 1-7 have been amended to correct the informalities noted.

Figures 1, 2, 4, 5a, 5b, 6 and 7 have been amended to place in condition for U.S. practice.